

would be allowable if rewritten to include all of the limitations of the independent claim and any intervening claims.

Claim 19 was rejected under 35 U.S.C. §103(a) over Park et al. U.S. Patent 6,351,300 and Ohta et al. U.S. Patent Application Publication 2001/0015783.

The presently claimed liquid crystal panel includes a first substrate having a first alignment film that has been aligned in a first alignment processing direction, and a second substrate having a second alignment film that has been aligned in a second alignment processing direction, and an injection port for injecting material in an injection direction parallel to the first alignment processing direction and the second alignment processing direction to form the liquid crystal layer. This arrangement is nowhere disclosed or suggested in the cited references.

The injection direction of the presently claimed liquid crystal material is parallel to the alignment directions.

The Office Action cites Park et al. '300 as allegedly disclosing a liquid crystal device having two alignment layers 53 and 63 and admits that Park et al. '300 does not disclose the initial homogeneous alignment state and an injection port, and cites Ohta et al. '783 as allegedly teaching a homogeneous

initial alignment state and Fig. 5 showing an injection port labeled INJ. However, Ohta et al. '783 does not disclose that the injection direction of the liquid crystal material is parallel to the first and second alignment directions, as recited in applicants' claim 19, for the reasons described next.

Ohta et al. '783, Fig. 1 and paragraph 0124, discloses a rectangular pixel located within a crossover region of scan signal line GL and a contra-voltage signal line CL plus two neighboring image signal lines DL. The pixel includes pixel electrode PX located in the longitudinal direction of the pixel, i.e., in the up/down direction of the drawing.

Although Ohta et al. '783 describes nothing about the positional relationship between the longitudinal direction of the pixel shown in Fig. 1 and the longitudinal direction of the display panel shown in Fig. 5 (side-to-side direction of the drawing), it is common practice in the art to arrange such that the longitudinal direction of the pixel is parallel to, or orthogonal to the longitudinal direction of the display panel, in order for the efficient arrangement of a plurality of pixels.

Ohta et al. '783, Fig. 19 and paragraph 0190, discloses that the initial alignment angle ϕ_{LC} is set at 75° , which angle is defined between the alignment direction (rubbing direction

RDR) and the applied electric field direction EDR (the direction connecting the pixel electrode PX and the counter electrode CT, equivalent to the side-to-side direction of Fig. 1). Also, Ohta et al. '783, paragraph 0191, discloses that Φ LC is such that when dielectric anisotropy $\Delta\epsilon$ is positive in polarity, it must be greater than or equal to 45° whereas if dielectric anisotropy $\Delta\epsilon$ is negative, it must exceed 0° and stays below 45° . Thus, the alignment direction is angled at greater than 0° and less than 90° relative to the side-to-side direction of Fig. 5.

Further, Ohta et al. '783, Fig. 5, discloses that the injection port INJ is provided at the center of the right side of the drawing, and that the injection direction of the liquid crystal material is the side-to-side direction of the drawing.

Accordingly, the alignment direction of the liquid crystal display device disclosed in Ohta et al. '783, Fig. 5, is angled at greater than 0° and less than 90° relative to the injection direction of the liquid crystal material, which is the side-to-side direction of the drawing. Thus, the alignment direction and the injection direction of the liquid crystal material are not parallel to each other. Accordingly, Ohta et al. '783 does not disclose or suggest the injection direction of the liquid

crystal material is parallel to the alignment direction, as recited in applicants' claim 19.

For the foregoing reasons, neither Park et al. '300 or Ohta et al. '783 contains any teaching, suggestion, reason, motivation or incentive that would have led one of ordinary skill in the art to applicants' claimed invention. Nor is there any disclosure or teaching in either of these references that would have suggested the desirability of combining any portions thereof effectively to anticipate or suggest applicants' presently claimed invention. Accordingly, reconsideration and withdrawal of this rejection are respectfully requested.

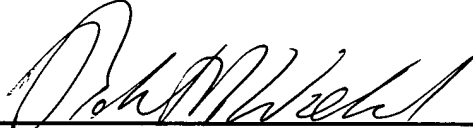
All claims 1-23 and 32-53 are proper in form and patentably distinguished over all grounds of rejection stated in the Office Action. Accordingly, allowance of all claims 1-23 and 32-53 is respectfully requested.

Should the Examiner deem that any further action by the applicants would be desirable to place this application in even better condition for issue, the Examiner is requested to telephone applicants' undersigned representatives.

Respectfully submitted,

PARKHURST & WENDEL, L.L.P.

January 25, 2005
Date


Roger W. Parkhurst
Registration No. 25,177
Robert N. Wieland
Registration No. 40,225

RWP:RNW/JMZ

Attorney Docket No.: OGOH:075

PARKHURST & WENDEL, L.L.P.
1421 Prince Street, Suite 210
Alexandria, Virginia 22314-2805
Telephone: (703) 739-0220

PLEASE ACCEPT THIS AS
AUTHORIZATION TO DEBIT
OR CREDIT FEES TO
DEP. ACCT. 16-0331
PARKHURST & WENDEL